

2002P11414US01
60,427-609**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of calibrating an active noise control system, comprising:

selecting at least one noise source sound as a calibration reference;

determining an actual system response to the calibration reference; and

calibrating the system to accommodate for any difference between the determined actual system response and an expected system response to the calibration reference.
2. (Original) The method of claim 1, including selecting a plurality of dominant order noise source sounds.
3. (Original) The method of claim 1, including determining the system response to the sound, determining a harmonic representation of the determined response and using the determined harmonic representation as the calibration reference.
4. (Original) The method of claim 3, including subsequently determining an actual harmonic representation of the system response to the same sound and determining whether the actual harmonic representation corresponds to the calibration reference.
5. (Original) The method of claim 4, wherein the system response comprises a microphone signal indicative of a sound detected by the microphone.

2002P11414US01
60,427-609

6. (Original) The method of claim 3, wherein the noise source is a vehicle engine and including determining the harmonic representation at a plurality of engine speeds and a plurality of throttle conditions.

7. (Original) The method of claim 1, wherein the noise source is a vehicle engine having a number of cylinders and the selected sound is from a dominant order which is a factor applied to the number of cylinders.

8. (Original) The method of claim 7, wherein the factor is $\frac{1}{2}$.

9. (Currently Amended) The method of claim 1, including estimating ~~the a~~ noise source sound as an inverse of a produced cancellation signal; and
using the estimated noise source sound as the selected at least one noise source sound.

10. (Currently Amended) The method of claim 1, including estimating ~~the a~~ noise source sound as the difference between a system response to the noise source sound and a produced cancellation signal; and
using the estimated noise source sound as the selected at least one noise source sound.

2002P11414US01
60,427-609

11. (Currently Amended) A noise control system, comprising:
a microphone that detects a sound;
a speaker; and
a controller that drives the speaker to selectively generate a noise cancellation signal and interprets a signal from the microphone indicating a resulting system response to a combination of a noise source sound and the noise cancellation signal, the controller using at least one noise source sound as a calibration reference, the controller determining an actual system response to the calibration reference and calibrating the system to accommodate for any difference between the actual system response and an expected system response to the calibration reference.

12. (Original) The system of claim 11, wherein the controller uses a plurality of dominant order noise source sounds.

13. (Original) The system of claim 11, wherein the controller determines the system response and a harmonic representation of the determined response, the controller using the determined harmonic representation as the calibration reference.

14. (Original) The system of claim 13, wherein the controller determines an actual harmonic representation of the system response at a selected time and determines whether the actual harmonic representation corresponds to the calibration reference.

2002P11414US01
60,427-609

15. (Original) The system of claim 13, wherein the noise source is a vehicle engine and the controller determines the harmonic representation at a plurality of engine speeds and a plurality of throttle conditions.

16. (Original) The system of claim 11, wherein the noise source is a vehicle engine having a number of cylinders and the calibration reference sound is from a dominant order which is a factor applied to the number of cylinders.

17. (Original) The system of claim 16, wherein the factor is $\frac{1}{2}$.

18. (Currently Amended) The system of claim 11, wherein the controller estimates ~~the~~ noise source sound as an inverse of a produced cancellation signal and the controller uses the estimated noise source sound as the at least one noise source sound.

19. (Currently Amended) The system of claim 11, wherein the controller estimates ~~the~~ noise source sound as the difference between the system response to the noise source sound and a produced cancellation signal and the controller uses the estimated noise source sound as the at least one noise source sound.

20. (Original) The system of claim 19, wherein the system response comprises a signal from the microphone.

2002P11414US01
60,427-609

21. (New) The system of claim 11, wherein the controller repeatedly calibrates the system over time.
22. (New) The method of claim 1, comprising repeatedly calibrating the system over time.